

WHAT IS CLAIMED IS:

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1. (Currently Amended) A stocker comprising:
    - a first sealing member for stocking an object to be stocked;
    - atmosphere control means for controlling an internal atmosphere of said first sealing member to a first atmosphere of an inert gas; and
    - transfer means for transporting an object to be stocked to an exposure apparatus using an F<sub>2</sub> excimer laser or receiving the object to be stocked from the exposure apparatus while the object to be stocked is shielded from an external atmosphere of said first sealing member.
  2. (Original) The stocker according to claim 1, wherein
    - the stocker further comprises a load-lock chamber, and
    - the object to be stocked is transported to outside of said first sealing member or received from the outside of said first sealing member via said load-lock chamber.
  3. (Original) The stocker according to claim 1, further comprising atmosphere measurement means for measuring the internal atmosphere of said first sealing member.
  4. (Original) The stocker according to claim 3, wherein said atmosphere measurement means includes an oxygen analyzer.

ay 5. (Original) The stocker according to claim 1, wherein the first atmosphere has an oxygen concentration of not more than 5 ppm at its steady state.

6. (Cancelled)

7. (Currently Amended) The stocker according to claim 1, wherein the inert gas includes a nitrogen gas, a helium gas, or a gas mixture of nitrogen and helium gas.

8. (Currently Amended) The stocker according to claim 1, further comprising means for storing the at least one object to be stocked, in a second sealing member inside said first sealing member, and

the object to be stocked is transported to the outside of said first sealing member while stored in said second sealing member.

9. (Original) The stocker according to claim 1, wherein the stocker is connected to the exposure apparatus via a highly airtight transfer path.

10. (Original) The stocker according to claim 1, wherein said atmosphere control means has gas injection means.

11. (Original) The stocker according to claim 1, wherein said atmosphere control means has evacuation means.

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12. (Cancelled)

13. (Currently Amended) The stocker according to claim 1, further comprising transfer means, arranged in a semiconductor manufacturing line, for transporting the object to be stocked to manufacturing apparatuses for performing various processes or receiving the object to be stocked from the manufacturing apparatuses for performing various processes.

14. (Original) The stocker according to claim 1, wherein the object to be stocked includes a reticle or mask.

15. (Original) The stocker according to claim 14, further comprising a reticle changer for supplying a desired reticle or mask to the exposure apparatus.

16. (Original) The stocker according to claim 1, wherein the object to be stocked includes a wafer.

17. (Currently Amended) An exposure apparatus comprising a stocker,  
said stocker including:  
a first sealing member for stocking an object to be stocked;  
atmosphere control means for controlling an internal atmosphere of said first  
sealing member to a first atmosphere of an inert gas; and

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transfer means for transporting an object to be stocked to the exposure apparatus, which uses an F<sub>2</sub> excimer laser, or receiving the object to be stocked from the exposure apparatus while the object to be stocked is shielded from an external atmosphere of said first sealing member.

18. (Currently Amended) A stocker comprising:

a first sealing member;

first atmosphere control means for controlling an internal atmosphere of said first sealing member to a first atmosphere of an inert gas;

second atmosphere control means for controlling an internal atmosphere of a second sealing member to a second atmosphere of an inert gas, wherein the second sealing member stores at least one object to be stocked and is stocked in said first sealing member; and

transfer means for transporting the second sealing member storing the at least one object to be stocked to an exposure apparatus using an F<sub>2</sub> excimer laser or receiving the second sealing member storing the at least one object to be stocked from the exposure apparatus while the second sealing member is shielded from an external atmosphere of said first sealing member.

19. (Original) The stocker according to claim 18, wherein

the stocker further comprises a load-lock chamber, and

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the object to be stocked is transported to outside of the first sealing member or received from the outside of said first sealing member via said load-lock chamber while stored in said second sealing member.

20. (Original) The stocker according to claim 18, further comprising atmosphere measurement means for measuring the internal atmospheres of said first and second sealing members.

21. (Original) The stocker according to claim 20, wherein said atmosphere measurement means includes an oxygen analyzer.

22. (Original) The stocker according to claim 18, wherein

the first atmosphere has an oxygen concentration of not more than 50 ppm at its steady state, and

the second atmosphere has an oxygen concentration of not more than 5 ppm at its steady state.

23. (Cancelled)

24. (Currently Amended) The stocker according to claim 18, wherein the inert gas includes a nitrogen gas, a helium gas, or a gas mixture of nitrogen gas and helium gas.

25. (Original) The stocker according to claim 18, wherein the stocker is connected to the exposure apparatus via a highly airtight transfer path.

26. (Original) The stocker according to claim 18, wherein said first and second atmosphere control means have gas injection means.

27. (Original) The stocker according to claim 18, wherein said first and second atmosphere control means have evacuation means.

28. (Cancelled)

29. (Currently Amended) The stocker according to claim 18, further comprising transfer means, arranged in a semiconductor manufacturing line, for transporting the object to be stocked to manufacturing apparatuses for performing various processes or receiving the object to be stocked from the manufacturing apparatuses for performing various processes.

30. (Original) The stocker according to claim 18, wherein the object to be stocked includes a reticle or mask.

31. (Original) The stocker according to claim 30, further comprising a reticle changer for supplying a desired reticle or mask to the exposure apparatus.

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32. (Original) The stocker according to claim 18, wherein the object to be stocked includes a wafer.

33. (Currently Amended) An exposure apparatus comprising a stocker,  
said stocker including:  
a first sealing member;  
first atmosphere control means for controlling an internal atmosphere of said first sealing member to a first atmosphere of an inert gas;  
second atmosphere control means for controlling an internal atmosphere of a second sealing member to a second atmosphere of an inert gas, wherein the second sealing member stores at least one object to be stocked and is stocked in said first sealing member;  
and  
transfer means for transporting the second sealing member storing the at least one object to be stocked to the exposure apparatus using an F<sub>2</sub> excimer laser or receiving the second sealing member storing the at least one object to be stocked from the exposure apparatus while the second sealing member is shielded from an external atmosphere of said first sealing member.

34. (Currently Amended) A semiconductor device manufacturing method comprising the steps of:  
installing manufacturing apparatuses, including an exposure apparatus, for performing various processes, in a semiconductor manufacturing factory; and

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manufacturing a semiconductor device in a plurality of processes by using the manufacturing apparatuses,

wherein the exposure apparatus has a stocker,

the stocker having:

a first sealing member;

first atmosphere control means for controlling an internal atmosphere of the first sealing member to a first atmosphere;

second atmosphere control means for controlling an internal atmosphere of a second sealing member to a second atmosphere of an inert gas, wherein the second sealing member stores at least one object to be stocked and is stocked in said first sealing member; and

transfer means for transporting the second sealing member storing the at least one object to be stocked to the exposure apparatus using an F<sub>2</sub> excimer laser or receiving the second sealing member storing the at least one object to be stocked from the exposure apparatus while the second sealing member is shielded from an external atmosphere of the first sealing member.

35. (Original) The method according to claim 34, further comprising the steps of:

connecting the manufacturing apparatuses by a local area network; and

communicating information about at least one of the manufacturing apparatuses between the local area network and an external network of the semiconductor manufacturing factory.



36. (Currently Amended) The method according to claim 35, further comprising performing at least one of (i) acquiring maintenance information of the manufacturing apparatuses by data communication by accessing via the external network a database provided by a vendor or user of the exposure apparatus, and (ii) managing production by data communication via the external network with a semiconductor manufacturing factory other than the semiconductor manufacturing factory.

37. (Currently Amended) A semiconductor manufacturing factory comprising:

- manufacturing apparatuses, including an exposure apparatus, for performing various processes;
- a local area network for connecting said manufacturing apparatuses; and
- a gateway for allowing the local area network to access an external network of said factory,

wherein information about at least one of said manufacturing apparatuses is communicated,

- the exposure apparatus has a stocker,
- the stocker has:
  - a first sealing member;
  - first atmosphere control means for controlling an internal atmosphere of said first sealing member to a first atmosphere of an inert gas;
  - second atmosphere control means for controlling an internal atmosphere of a second sealing member to a second atmosphere of an inert gas, wherein the second sealing

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member stores at least one object to be stocked and is stocked in said first sealing member;  
and

transfer means for transporting the second sealing member storing the at least one object to be stocked to the exposure apparatus using an F<sub>2</sub> excimer laser or receiving the second sealing member storing the at least one object to be stocked from the exposure apparatus while the second sealing member is shielded from an external atmosphere of said first sealing member.

38. (Currently Amended) A maintenance method for an exposure apparatus installed in a semiconductor manufacturing factory, the method comprising the steps of:

causing a vendor or user of the exposure apparatus to provide a maintenance database connected to an external network of the semiconductor manufacturing factory;

authenticating access from the semiconductor manufacturing factory to the maintenance database via the external network; and

transmitting maintenance information accumulated in the maintenance database to the semiconductor manufacturing factory via the external network,

wherein the exposure apparatus has a stocker,

the stocker having:

a first sealing member;

first atmosphere control means for controlling an internal atmosphere of said first sealing member to a first atmosphere of an inert gas;

second atmosphere control means for controlling an internal atmosphere of a second sealing member to a second atmosphere of an inert gas, wherein the second sealing member stores at least one object to be stocked and is stocked in said first sealing member; and

transfer means for transporting the second sealing member storing the at least one object to be stocked to the exposure apparatus using an F<sub>2</sub> excimer laser or receiving the second sealing member storing the at least one object to be stocked from the exposure apparatus while the second sealing member is shielded from an external atmosphere of said first sealing member.

39. (Currently Amended) The apparatus according to claim 33, further comprising:

a display;

a network interface; and

a computer for executing network access software, and

maintenance information of the exposure apparatus can be communicated via a computer network.

40. (Currently Amended) The apparatus according to claim 39, wherein the network access software is connected to an external network of a factory in which the exposure apparatus is installed, provides on said display a user interface for accessing a maintenance database provided by a vendor or user of the exposure apparatus, and enables obtaining information from the database via the external network.

41. (New) A semiconductor device manufacturing method comprising the steps of:

Q2 exposing an object to be processed using an exposure apparatus comprising a stocker and using an F<sub>2</sub> excimer laser; and

developing the exposed object to be processed,

wherein the stocker has:

(i) a first annealing member for stocking an object to be stocked;

(ii) atmosphere control means for controlling an internal atmosphere of the first sealing member to a first atmosphere of an inert gas; and

(iii) transfer means for transporting an object to be stocked from the exposure apparatus using or receiving the object to be stocked from the exposure apparatus, while the object to be stocked is shielded from an external atmosphere of the first sealing member.